

## 核-壳有机硅/苯乙烯-甲基丙烯酸丁酯超浓乳液的合成与表征

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## Synthesis of Core-Shell Polymer Consisting of Polysiloxane and Styrene-Butyl Methacrylate by Concentrated Emulsion Polymerization

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**摘要** 以甲基丙烯酸丁酯、苯乙烯、八甲基环四硅氧烷(D<sub>4</sub>)为分散相, 偶氮二异丁腈(azobisisobutyronitrile, AIBN)为引发剂, 通过超浓乳液聚合制备具有一定核-壳结构的复合高分子材料. 采用透射电镜(transmission electron microscopy, TEM)观测了材料的形态特征, 并表征了共聚物的吸水率和接触角. 结果表明, 所制备的超浓乳液体系具有良好的稳定性, 聚合材料耐水性较好.

**关键词:** [超浓乳液](#) [八甲基环四硅氧烷](#) [甲基丙烯酸丁酯](#) [核-壳](#)

**Abstract:** This paper presents the core-shell composite polymer produced by concentrated emulsion, whose continuous phase contains styrene (St), butyl methacrylate (BMA), etamethyltetraeyelosiloxane (D<sub>4</sub>), and azobisisobutyronitrile (AIBN) as initiator. The products are characterized by transmission electron microscopy (TEM), and Fourier transform infrared spectroscopy (FTIR). The results show that concentrated emulsion system has good stability and water resistance of the polymer has been greatly improved.

**Keywords:** [concentrated emulsion](#), [etamethyltetraeyelosiloxane](#), [butyl methacrylate](#), [core-shell](#)

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